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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/705,894	11/13/2003	Yoshiaki Yazawa	HITA.0459	6099

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EXAMINER	
BROWN, VERNAL U	
ART UNIT	PAPER NUMBER
2612	

DATE MAILED: 04/19/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/705,894	YAZAWA ET AL.	
	Examiner	Art Unit	
	Vernal U. Brown	2612	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *11/13/06*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☐ Claim(s) _____ is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-20* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *13 November 2003* is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

The application of Yoshiaki Yazawa for Communication System filed 11/13/2003 has been examined. Claims 1-20 have been examined.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims18-20 are rejected under 35 U.S.C. 102(b) as being anticipated by Rodgers et al. US Patent 6362737.

Regarding claims 18-20, Rodgers et al. teaches transmitting from a reader (124, 126) information containing a chip ID code (col. 26 lines 60-65) while performing a frequency modulation (col. 19 lines 65-67); detecting in a chip (104-112) whether there is a match between said chip ID code transmitted from the reader and a chip ID number unique to said chip (col. 26 lines 55-60). Rodgers et al. the process of transmitting the chip ID and verifying the chip id is used to read data from the chip and write data into the chip (col. col. 26 line 64-col. 27 line 10).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 1-5, 15-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Rodgers et al. US Patent 6362737 in view of Stobbe US Patent 6070803.

Regarding claims 1, 15-16 Rodgers et al. teaches a communication system comprising: a plurality of chips (104, 105) , each chip includes a resonant circuit 204, a sensor for measuring data (col. 22 lines 65-67), a chip ID retaining circuit (memory 808) for retaining a chip ID number (col. 18 lines 53-57). Rodger teaches a reader provided by monitor 124 and 126 for carrying out transmission and/or reception of data to or from said plurality of chips (col. 18 lines 40-46). Rodgers et al teaches the monitor dividing a frequency (col. 12 lines 17-20) that implies a frequency converter. Rodgers et al. teaches a chip ID compare circuit for comparing said chip ID number of each said chip for a match; wherein (col. 21 lines 11-12) and also teaches adjusting the carriers to a resonance frequency which is optimum per said chip and which has been obtained by a frequency sweep beforehand, and said reader is configured to communicate with each of said chips at said resonance frequency (col. 11 line 60-col. 12 line 15). Rodgers et al. is however not explicit in teaching the reader having a resonant circuit. Stobbe in an art related reading device for a transponder invention teaches transponder having a first resonant circuit formed by inductor L2 and capacitor C2 and a reader having a resonance circuit form by inductor L1 and capacitor C1 (figure 2).

It would have been obvious to one of ordinary skill in the art for the reader to have a resonant circuit in Rodgers et al. because this a conventional means use to provide inductive coupling between the reader and transponder for the transfer of data.

Regarding claim 2, Rodgers et al. teaches storing resonance frequency information which stores a list of correspondence between said chip ID number and said optimum resonance frequency (col. 18 lines 53-56).

Regarding claim 3, Rodgers et al. teaches host 122 as the external device connected to the reader (122, 126). Rodgers et al. teaches the host memory stores identification information (col. 42 lines 40-45) and teaches the identification includes the resonant frequency and the identification code (col. 11 line 60-65).

Regarding claim 4, Rodgers et al. teaches the tank circuit (resonant circuit) determines the resonance frequency (col. 36 lines 13-16).

Regarding claim 5, Rodgers et al. teaches resonance frequencies are determined separately for each of said chips owing to circumstances around each said chip such environmental condition (col. 2 lines 38-43).

Claim 6-10 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Rodgers et al. US Patent 6362737 in view of Stobbe US Patent 6070803 and further in view of Lander US Patent 6957157.

Regarding claims 6-9, Rodgers et al. teaches chip (transceiver) comprising a rectification circuit 206, demodulating circuit provided by the receiver for demodulating the received signal (col. 31 lines 50-53), modulating circuit for modulating the signal transmitted from the tag (col. 31 lines 55-55), power supply control unit 204 for receiving the signal from which power is

extracted by the rectifier, a communication control circuit 212 (col. 27 lines 29-43). Rodgers et al teaches the transponder (transceiver) is address using its full identification number (col. 30 lines 44-45) and further implying comparing the received identification with the stored identification in order for the transceiver to recognize when it is addressed by the interrogator. Rodgers et al. is silent on teaching a signal processing circuit for digitizing signal detected by the sensor. Lander in an art related transponder system teaches a signal processor use for digitizing signal detected by the sensor (col. 5 lines 1-19) in order to provide data represented of the sense condition. Lander also teaches the sensor is configure to measure the pressure in a piping mechanism and detect condition of the fluid such as leakage (col. 9 lines 7-15).

It would have been obvious to one of ordinary skill in the art to have a digital signal processor for processing the signal received by the sensor in Rodgers et al. in view of Stobbe because Rodgers et al. suggests the use of an analog to digital converter for converting the sense signal into a digital signal and Lander teaches the use of the digital signal processor as a means of generating data representative of the signal received from the sensor and to enhance the sensed results.

Regarding claim 10, Rodgers et al. teaches the chip having a sensor for measuring data (col. 22 lines 65-67) and the chip ID is transmitted with the data (col. 18 lines 53-57). Rodgers et al are located in fixed position (col. 10 lines 65-67) and the data transmitted by the transceiver (chip) correspond to the position of the transceiver.

Regarding claim 14, Rodgers et al. teaches an external control device provided by host 122 , a transceiver (140, 142) connected to the external control device and transceiver antenna (150, 152) and the reader 124 uses the antenna to communicate with the chips (col. 9 lines 11-

20).

Claims 11-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Rodgers et al. US Patent 6362737 in view of Stobbe US Patent 6070803 and further in view of Lander US Patent 6957157 and further in view of Yamashita et al. US Patent 5936157.

Regarding claims 11-12, Rodgers et al. teaches a sensor attached to a chip for taking measurement (see response to claim 1) but is silent on teaching the section of piping where the chips are installed have lower conductivity than other sections. One skilled in the art recognizes that installing sensor in a location with a lower conductivity allows the measurement of the change in temperature and permitting the lowering of the thermal resistant of the fluid temperature measuring element as evidenced by Yamashita et al. (col. 10 lines 42-45) in order to obtain reliable measurements data. Yamashita et al. also teaches sensors installed in through holes in a piping fixture (figure 2).

It would have been obvious to one of ordinary skill in the art for the section of piping where the chips are installed have lower conductivity than other sections because this provides for the lowering of the thermal resistant of the fluid temperature measuring element in order to obtain reliable measurements data.

Regarding claim 13, Rodgers et al. teaches the chip are supplied with required electric power by radio frequency transmission from said reader by the rectification of the received signal from the reader (col. 31 lines 48-51).

Claim 17 is rejected under 35 U.S.C. 103(a) as being unpatentable over Rodgers et al. US Patent 6362737 in view of Stobbe US Patent 6070803 and further in view of Tutle US Patent Application 20050040961.

Regarding claim 17, Rodgers et al. teaches a reader (124) for transmitting and receiving signals (col. 18 lines 40-46) but is silent on teaching controlling the strength of signals to be transmitted to the chips according to the strength of the signals received from the chips. Tuttle in an art related identification system invention teaches controlling the strength of signals to be transmitted to the chips according to the strength of the signals received from the chips (paragraph 0037) in order to optimize the communication link

It would have been obvious to one of ordinary skill in the art to control the strength of signals to be transmitted to the chips according to the strength of the signals received from the chips in order to adjust the communication range and optimize the communication link between the reader and the chips.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Vernal U. Brown whose telephone number is 571-272-3060. The examiner can normally be reached on 8:30-7:00 Monday-Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wendy Garber can be reached on 571-272-7308. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Vernal Brown
April 11, 2006

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